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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,846	04/05/2004	Solomon Trainin	P-6407-US	3125

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EXAMINER	
DANG, KHANH	

ART UNIT	PAPER NUMBER
2111	

DATE MAILED: 08/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/816,846	TRAININ, SOLOMON	
	Examiner	Art Unit	
	Justin I. King	2111	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 July 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-15,19-23,25,26,28-31 and 35-37* is/are pending in the application.

4a) Of the above claim(s) *6-15,19-22,29-31 and 35-37* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-5,23,25,26 and 28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1, 3, 23, and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of the submitted prior art "On Adaptive DLC Mechanisms for Fixed Broadband Wireless Networks" by Dravopoulos et al and Trans et al. (US Pub No. 2003/0016770).

Referring to claims 1 and 23: Dravopoulos discloses synchronizing interrupts of a processor with signals from a wireless link synchronization unit (Figure 1, Dravopoulos discloses a wireless system, pages 640-641, Dravopoulos discloses data link handling includes controlling the timing and slots for each request/interrupt; Dravopoulos' means to handle the request/interrupt is the processor; Dravopoulos' means to store the pending request/interrupt for

process is the storage). Although Dravopoulos discloses the needs of timing control in handling data link, Dravopoulos does not explicitly disclose the claimed slot timer as to implement the timing control. Trans discloses a network communication system with a frame synchronizer (figure 82); Trans' frame synchronizer is the claimed slot timer. Trans teaches one on how to implement the timing control during data communication. Thus, it would have been obvious to one having ordinary skill in the computer art at the time Applicant made the invention to adapt Trans' teaching onto Dravopoulos because Trans teaches one on how to implement the timing control as required in practicing Dravopoulos.

Referring to claims 3 and 25: Dravopoulos discloses scheduling interrupts of said processor in advance of slot signals issued by said wireless link synchronization unit (page 641, first paragraph, Dravopoulos discloses the Master/Slave scheduler for slots allocation).

Referring to claim 26: Claim is rejected with the same argument for claim 1; furthermore, Dravopoulos discloses an antenna (page 639, figure 1).

4. Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of the submitted prior art "On Adaptive DLC Mechanisms for Fixed Broadband Wireless Networks" by Dravopoulos et al., Trans, and Suzuki (U.S. Patent No. 5,694,613).

Referring to claim 4: Dravopoulos and Trans' disclosures are stated above; neither one discloses dividing a function into at least two or more segments wherein a segment may be processed to completion by said processor within the time available in a slot. Suzuki discloses pipelining process. Suzuki teaches one to achieve a higher performance by dividing a function into at least two or more segments wherein a segment may be processed to completion by said

processor within the time available in a slot (column 1, lines 22-24, breaking a complex, time consuming function into a series of simpler, shorter operations). Hence it would have been obvious to one having ordinary skill in the computer art at the time Applicant made the invention to adapt Suzuki's teaching onto Dravopoulos because Suzuki teaches one to achieve a higher performance by dividing a function into multiple operations.

Referring to claim 5: Since Suzuki teaches dividing any time-consuming function into a series of simpler and shorter operations for a higher performance, one with ordinary computer skill would apply Suzuki's teaching dividing a background function to achieve a higher performance.

5. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of the submitted prior art "On Adaptive DLC Mechanisms for Fixed Broadband Wireless Networks" by Dravopoulos et al., Trans, and the "Operating System Concepts" by Peterson et al..

Referring to claim 28: The disclosures of Dravopoulos and Trans are stated above; neither one explicitly discloses comparing a register to store an indication of a background function waiting to be processed.

Peterson, in his popular academic textbook, discloses the preemptive algorithm. Peterson teaches one to compare the newly arrived task's priority to the currently running task, and to preempt the currently running task if the newly arrived task has a higher priority (page 121, last paragraph, page 122, 1st paragraph). Peterson's means for storing the priority for comparison is equivalent to the claimed register. Hence, it would have been obvious to one having ordinary

skill in the computer art at the time Applicant made the invention to adapt Peterson's teaching onto Dravopoulos and Suzuki because Peterson teaches one to ensure any time sensitive task be processed on time by preempting the currently running task with a request with a higher priority.

Response to Arguments

6. Applicant's argument is towards the amended claim limitations. Applicant's argument is moot in view of the new rejection with new prior art as stated above.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin I. King whose telephone number is 571-272-3628. The examiner can normally be reached on Monday through Friday, 9:00 am to 5:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on 571-272-3632 or on the central telephone number, (571) 272-2100. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lastly, paper copies of cited U.S. patents and U.S. patent application publications will cease to be mailed to applicants with Office actions as of June 2004. Paper copies of foreign patents and non-patent literature will continue to be included with office actions. These cited U.S. patents and patent application publications are available for download via the Office's PAIR. As an alternate source, all U.S. patents and patent application publications are available on the USPTO web site (www.uspto.gov), from the Office of Public Records and from commercial sources. Applicants are referred to the Electronic Business Center (EBC) at http://www.uspto.gov/ebc/index.html or 1-866-217-9197 for information on this policy. Requests to restart a period for response due to a missing U.S. patent or patent application publications will not be granted.

MARK H. RINEHART
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

Justin King
August 4, 2006